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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/431,365	11/01/1999	CARL G DEMARCKEN	09765/021001	8582

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EXAMINER
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PORTER, RACHEL L

ART UNIT	PAPER NUMBER
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3626

DATE MAILED: 07/30/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/431,365

Applicant(s)

DEMARCKEN, CARL G

Examiner

Rachel L. Porter

Art Unit

3626

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 19 May 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-8 and 27-51 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 and 27-51 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 18.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Notice to Applicant***

1. This communication is in response to the amendments received on 5/19/03 and 8/28/02. Claims 1-8 and 27-51 are pending. Claims 9-26 have been cancelled. Claims 1-8 have been amended. Claims 27-51 are newly added.

### ***Information Disclosure Statement***

2. The information disclosure statement (IDS) submitted on 5/19/03 has been entered and has been considered by the examiner.

### ***Response to Arguments***

3. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

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5. Claims 1-8 and 27-51 rejected under 35 U.S.C. 102(e) as being anticipated by DeMarcken et al (USPN 6,295,521-referred to hereinafter as DeMarcken '521)

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per claims 1 and 2, DeMarcken'521 teaches a travel planning system comprising:

- a requirements generator module to generate a plurality of travel requirements; and (col. 4 , line 4-14)
- a selection module to output a set of diverse travel options smaller than a candidate set of travel options by selecting from the candidate set of travel options, for each travel requirement in the plurality, one or more travel options that satisfy that travel requirement, wherein the candidate set is represented using a data structure that compactly stores the candidate set of travel options as a graph data structure (col. 5, line 25-col. 6, line 27;col. 45, lines 23-28)

As per the limitations of claim 3, see DeMarcken'521: col. 4, lines 14-41.

As per claim 4, DeMarcken'521 teaches a travel planning system further comprising:

- a travel option generator module to generate a first ordered set of travel options using a first preference function and a second ordered set of travel options using a second preference function, and (col. 5, line 26-col. 6, line 6)
- wherein the selection module to output a set of diverse travel options by selecting a first and second number of travel options from each of the first and second ordered set of travel options. (col. 49, line 30-col. 50, line 39; Figure 3)

As per claim 5, DeMarcken'521 teaches the travel planning system of claim 1 wherein the requirements generator module further comprises a template. (col. 17, line 20-col. 19, line 32)

As per claim 6, DeMarcken'521 teaches the travel planning system of claim 1 wherein at least one of the travel requirements within the plurality is not a user entered travel requirement. (col. 4, lines 1-14)

As per claims 7 and 8, DeMarcken'521 teaches the travel planning system of claim 1 wherein travel requirements comprise at least one of: trips on a particular carrier, non-stop travel, outbound travel departing in a predefined time period (e.g. morning, afternoon, evening or a predefined date), return trips departing in a predefined time period, non-stop travel on a predefined airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date. (col. 17, line 20-col. 19, line 32)

As per claim 27, DeMarcken'521 teaches the travel planning system of claim 1 wherein the compact data structure comprises a directed acyclic graph. (col. 5, line 25-col. 6, line 27)

As per claim 28, DeMarcken'521 teaches a travel planning system wherein the compact data structure comprises a grammar. (col. 45, lines 23-28)

As per claim 29, DeMarcken'521 teaches a method for generating a diverse set of travel options, the method comprising:

- receiving a candidate set of travel options based on a user input, the candidate set of travel options represented using a data structure that compactly stores the candidate set of travel options; (col. 5, line 25-col. 6, line 6)
- enumerating a first ordered list of travel options from the data structure that are compliant with a first travel requirement; (col. 49, line 30-col. 50, line 39; Figure 3)
- enumerating a second ordered list of travel options from the data structure that are compliant with a second travel requirement; and (col. 49, line 30-col. 50, line 39; Figure 3)
- combining a first number of travel options from the first ordered list with a second number of travel options from the second ordered list to output a diverse set of travel options, smaller than a candidate set of travel options, that includes at least one travel option compliant with the first travel requirement and at least one travel option compliant with second travel requirement. (Table 2; col. 7, line 50-col. 6, line 57; col. 9, line 54-col. 10, line 7)

As per claim 30, DeMarcken'521 teaches method of claim 29 further comprising generating the first travel requirement and the second travel requirement based on a fixed list. (col. 29, lines 4-13)

As per the limitations of claims 31-33, see DeMarcken'521. (col. 50, lines 22-38; col. 55, line 48-col. 56, line 67; Figures 8A-8C)

As per claim 34, DeMarcken'521 teaches a method wherein the data structure includes nodes that hold one or more values that can be used to provide travel options. (Figures 3A-3B)

As per the limitations of claim 35, see DeMarcken'521: col. 10, line 50-col. 11, line 67; col. 45, line 23-col. 49, line 28; col. 50, lines 22-38; col. 55, line 48-col. 56, line 67; Table 40.

As per claim 36, DeMarcken'521 teaches a method wherein enumerating a first ordered list of travel options further comprises:

- identifying children nodes for each parent node of the data structure; and (Tables 36-38)
- identifying a best solution for each node based on a best solution for each of the children nodes of the respective parent node. (col. 51, lines 4-55)

As per claim 37, DeMarcken'521 teaches the method of claim 34 wherein the data structure comprises a total number of nodes less than a total number of travel options in the candidate set of travel options. (Table 37)

As per claim 38, DeMarcken'521 teaches the method of claim 34 wherein the nodes comprise at least one of an AND node, an OR node, and a terminal node. (col. 48, line 63-col. 49, line 3)

As per the limitations of claim 39, see DeMarcken'521, Table 5.

As per claim 40, DeMarcken'521 teaches a method further comprising rendering the diverse set of travel options on an output device. (col. 4, lines 14-41)

As per claim 41, DeMarcken'521 teaches the method of claim 29 wherein at least one of the first and second travel requirements is not a user entered travel requirement. (col. 4, lines 1-14)

As per claims 42-43, DeMarcken'521 teaches the method of claim 29 wherein the first and second travel requirements comprise at least one of travel on a particular carrier, non-stop travel, outbound travel departing in a predefined time period, return travel departing in a predefined time period, non-stop travel on a particular airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date and wherein the predefined time period comprises morning, afternoon, evening or a predefined date. (col. 17, line 20-col. 19, line 32)

As per claim 44, DeMarcken'521 teaches a method further comprising defining a template of travel requirements. (col. 17, line 20-col. 19, line 32)

As per claims 45-46, see DeMarcken'521: col. 22, line 58-col. 23, line 10.

As per claims 47-48, DeMarcken'521 teaches a method wherein the template comprises at least one of travel on a particular carrier, non-stop travel, outbound travel departing in a predefined time period, return travel departing in a predefined time period, non-stop travel on a particular airline, or travel with an outbound departure on a first predefined date and a return arrival on a second predefined date and wherein the predefined time period comprises morning, afternoon, evening or a predefined date. (col. 17, line 20-col. 19, line 32)



As per claim 49, DeMarcken'521 teaches the method of claim 29 wherein the data structure comprises a directed acyclic graph. (col. 5, line 25-col. 6, line 27)

As per claim 50, DeMarcken'521 teaches the method of claim 29 wherein the data structure comprises a grammar. (col. 45, lines 23-28)

As per claim 51, the present claim repeats the subject matter of claim 29 as an article of manufacture encoding the instructions that cause a computer processor to perform the method of claim 29 rather than as a series of steps. As the underlying process has been shown to be fully computer enabled and disclosed by the teachings of DeMarcken'521 in the above rejection of claim 29, it is readily apparent that the DeMarcken'521 reference includes an article of manufacture encoding the instructions that cause a computer to perform the recited functions. As such, these limitations are rejected for the same reasons provided in the rejection of claim 29 and incorporated herein.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Rachel L. Porter whose telephone number is 703-305-0108. The examiner can normally be reached on M-F, 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Joseph Thomas can be reached on (703) 305-9588. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-7687 for regular communications and (703)305-7687 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

RP  
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July 27, 2003

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